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E-Commerce Developments

APT Broadband Summit Adopts Action Plan

1. Introduction

A Ministerial Conference organized to coincide with the Silver Jubilee of the Asia-Pacific Telecommunity (APT), in Bangkok on July 1–2, focused on how this region can achieve the potential to become an ICT hub of the world with a well-developed information and communication network and applications. With the great diversity of cultures, huge population and vibrant economies, the Asia-Pacific is today one of the world's largest telecommunications markets. Ministers and deputy ministers from 32 Asia-Pacific economies attended the conference, hosted by the Royal Government of Thailand. The conference received greetings of UN Secretary-General Kofi Annan who noted the value of access to information and communications technologies in addressing development problems was at the heart of the first phase of the World Summit on the Information Society. The Bangkok Agenda for Broadband and ICT Development in the Asia-Pacific was approved.

The Executive Director of APT, Mr. Amarendra Narayan observed that experiences have shown that Broadband and ICT have progressed rapidly when Governments have taken the lead to promote their applications in day-to-day working; and where government have encouraged the private sector to fully participate in the information revolution. While the region has tremendous opportunities, Narayan said there are problems of uncoordinated infrastructure development. "While there is access network capacity in some places where prices are falling below market reality and at many places much of the population remains unconnected." He suggested the coordination of technology and applications can play a vital role in reducing illiteracy and intelligent utilization of ICT can help in reducing logistics costs of providing various services. "Experience has shown," Narayan concluded, "that constructive partnership at national, regional and international levels is the only way to make rapid progress in this direction."

In a keynote address the Executive Secretary of the UN Economic and Social Commission for Asia and the Pacific (UNESCAP) Mr. Kim Hak-Su highlighted the "power of ICT from e-business to e-governance, from e-education to telemedicine, tools to propagate knowledge and promote mutual understanding and eventually improving the living standards in this region." In the Inaugural Address, His Excellency Dr. Surapong Suebwonglee, Minister of Information and Communication Technology of Thailand said "without access to communications we cannot even start to think about the benefits that ICT brings to our industries, education system and commerce and to the way we run government." The keynote presentation by the Secretary General of the International Telecommunication Union (ITU), Mr. Yoshio Utsumi is presented in the following report. All presentations are available on the APT website www.aptsec.org.

2. Afghanistan

H.E. Mohammad M. Stanakzai

In view of the fact that we need to achieve the national goals through acceleration of the reconstruction/development initiatives, it will not be possible unless we build the backbone infrastructure that shall lead to broader use of Broad Band and ICT in different areas particular for increasing government and private sector efficiency, access to information and education.

Afghanistan has adopted a policy benefiting from the rich experience of international community and creates an enabling environment for private and public sector investment. We moved from a situation were the government had the full monopoly on Telecommunication with only two three centers in the whole territory of

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Afghanistan connected to outside world without any body could make a call from outside Afghanistan to a situation where today we have two private sector mobile operators, a national fixed line operator, several Internet providers and we moved from 42,000 manual and analogue telephones to half million mobile and fixed digital telephone in addition to the emergency radio and Thoray telephone being in use as public call centers, Establishment of Multipurpose Tele centers in our post offices. By the end of this year another GSM and two fixed line licenses will be issued to the private sector.

By realizing the importance of the ICT and broadband in reconstruction of Afghanistan the Telecommunication development plan is prepared in such away that facilitate the access of Afghan people to ICT and Broad Band through the following backbone projects:

– Nationwide Satellite backbone Network

  a. Satellite Network that with a large earth station that will mesh all 34 provinces of Afghanistan plus Government institutions with voice date fax and video conferencing facilities
  b. VoIP satellite backbone network that will cover all 365 districts in the country

– Optical Backbone Fiber Ring
  We planned to install a fiber ring along the major National Highways this will provide a broad band connectivity across the country enabling different entities to transfer data with high speed.

The feasibility study of the proposed 3,300 km telecommunications backbone fiber ring has been completed in December 2003. The ring will be interconnected with the neighboring countries through bilateral agreements which will be eventually connected with the Trans-Europe-Asia fiber cable. This provides alternative routing as traffic demands increase, reducing the cost and will enable boarder use of ICT in the country.

These projects will enable the people of Afghanistan to stay connected and access the information.

HRD is the key challenge for us and we will not be able to achieve our objectives without the support of international organizations and countries. Since sharing of information and transfer of knowledge play a significant important role therefore the affiliation and cooperation between the training institutions of member countries will help and create a wealth of knowledge experience and innovation for further development and will contribute to HRD in least developed countries.

We have taken initial steps towards creation of institutions in the field of regulation, standardization and training of specialists which are very young and un experiences and lacking enough capacity to fulfill increasing need and demand of the country, as priority we need support in all these areas rather quickly.

3. Bangladesh

H.E. Md. Aminul Houqe, Minister of Posts and Telecommunications

Our Government has given much importance to the development of ICT in the country. ICT policy of the country has well reflected the importance of development of an Information society in its vision and objectives. This policy aims at building an ICT-driven nation comprising of knowledge-based society by the year 2006. In view of this, a countrywide ICT infrastructure will be developed to insure access to information by every citizen to facilitate empowerment of people and enhance democratic values and norms for sustainable economic development by using the infrastructure for human resources development, governance, e-commerce, banking, public utility services and all sorts of on-line ICT-enabled services.

According to National Telecommunication Policy 1998 an integrated and reliable transmission network that covers the entire country and is capable of providing voice, video, data and imaging services will be ensured. The network: may include fiber optic, radio and also satellite systems. The aim is to create the National Information infrastructure (NII) and integrate it through the Information Super Highway to the Global Information Infrastructure (GII) thereby creating the potential to enter the global market for information processing.

High-speed Internet service is made available in Bangladesh by some private ISPs through wireless and by only public operator, Bangladesh Telegraph and Telephone Board (BTTB) through DSL. Although BTTB has installed ISDN lines in some of its new exchanges but ADSL service has not still been introduced yet. Some of the private service providers use ADSL technology to provide Internet service only. General Packet Radio Service (GPRS) is still to come in Bangladesh. Some service providers provide Internet service through Cable modem.

In order to have a competitive market in the telecom sector and to encourage huge investment and private operator participation, the Government of Bangladesh has adopted the national Telecom Policy 1998. The objective of the new policy includes:

– Promotion of exchange of information, national integration, universal access and digitalization and to new technology;
– Creation of a competitive framework and market-oriented regime;
– A liberalized tariff policy;
– Mobilization of public and private sector resources to develop the sector, including encouragement of domestic and foreign private sector investment; and
– Commitment to establish an autonomous Telecommunication Regulatory Commission (TRC) that regulates the telecommunication sector.

In accordance with the above commitment, legislative actions had been completed to facilitate the formation of an independent and autonomous TRC. TRC has been working since 31 January 2002. It is expected that this will create a situation where private entrepreneurs both domestic and multinational, will be attracted to make significant investment to satisfy the needs. The regulatory commission will ensure essential ingredients like a liberalized environment, pragmatic thinking, cultivation of a flexible approach, practical actions and involvement of all the parties concerned for the greater look of the country and its people. The main functions of TRC will be to issue licenses to private operators, control tariffs, and regulate technical standards, prepare national numbering scheme, present international organizations and encourage investment in the sector.

4. Bhutan

Pema Choejey

The Royal Government has always believed that people should be at the center of development, and since the launching of the first Five Year Socio-economic Development Plan in 1961 the country has spared no efforts in uplifting the living conditions and quality of life of every Bhutanese citizen. However, this has not been easy. Bhutan faces a set of unique challenges owing to its history of isolation and under-development, harsh and difficult terrain, scattered habitat and land lockedness. The efficacy of information and communications technology (ICT) to propel Bhutan into a higher plane of development is clearly established and recognized and today at all levels. ICT will help by both enhancing the ongoing efforts as well as by helping overcome the challenges and deterrents to our development efforts mentioned above.

ICT development has been made one of the key responsibilities of the newly (2003) established Ministry of Information and Communications. It is entrusted with the mandate to provide leadership and coordinate ICT development in the country. In a significant effort to inject further impetus towards realizing a progressive ICT state, a number of initiatives have been undertaken following the establishment of the new Ministry of Information and Communications and the WSIS summit in Geneva last year:

– drafting of Bhutan ICT Policy and Strategy (BIPS);
– drafting of Bhutan ICT and Media Act; and
– the institution of ICT units in all government ministries.

The BIPS was drafted drawing in substantially from the DOI report of the UNDP and its corporate partners. It identifies five strategic areas viz. Infrastructure, Human Capacity, Policy, Enterprise and Content and Applications, and articulates the policy and strategic action plan in each area. Even as I speak, BIPS is awaiting official launch following its endorsement by the Cabinet of the Council of Ministers on 22 June 2004.

The draft of the Bhutan ICT and Media Act has been completed and will be submitted to the annual National Assembly Session, which starts in July for enactment. It will provide for a modern technology neutral and pro-competition policy and regulatory environment in ICT. It has taken into account the convergence of technologies and Bhutan's bid to accede to the WTO.

One cannot amply assert the importance of broadband in today's information and knowledge society. Those of us who are still in the realm of dial up and shared lease line connections are only too aware that our e-governance, e-commerce, e-education, e-health, etc. can hardly be practicable without adequate bandwidth. We fully recognize the need for broadband connectivity both within the country and internationally. Its importance has been amply articulated and underlined by the BIPS document mentioned above. Fiber optic cables have already been laid from Phuntsholing at the border with India to the Capital City, Thimphu, by Bhutan telecom, the only telecommunications service provider in the country. Bhutan Power Corporation (BPC), electricity service provider, has laid optical ground wires connecting Thimphu to Wangdi Phodrang, which is about 80 km away. BPC has plans to further extend this optical network to all its power grids. Additionally the Ministry of Information and Commu-

nications has a plan to install east-west fiber along the lateral highway covering approximately 600 km. By the end of 9th Five Year Plan (2007) the aim is to cover all 20 districts with fiber optic network. A fiber optic network connecting all government offices in Thimphu will also be implemented during the ongoing 9th Five Year Plan.

5. Brunei Darussalam

Ibrahim Haji Ali, Senior Special Duties Officer, Ministry of Communications

It is undeniable that we can gain substantially from broadband as it brings opportunities that can improve our quality of life. Socio-economic progress and business development are greatly supported by this technology. Thus, I feel it is not wrong to regard broadband as a vehicle for development.

For Brunei Darussalam, we do not wish to be left behind in making the most out of broadband technology. The Government has been very supportive in the development of telecommunications infrastructure. It is our goal to develop an e-society in Brunei Darussalam where ICT is widely used by its people. Thus, strategies and policies are shaped and formulated towards encouraging wider usage of ICT.

Towards this goal, Brunei Darussalam has installed an extensive broadband backbone optical network covering the whole country. A number of e-projects are also being implemented. The Government through its Public Services Vision 21 has been making concerted efforts to reinvent the public sector through the adoption of ICT-driven processes and to move it up the value chain. To support this initiative, the government has allocated a substantial budget to mobilize e-government applications and services. The e-Government projects are planned to get all the public services in the government to be online and will provide training to the public, so that, they can access these services easily.

Next Generation Network (NGN) has been established across Brunei Darussalam, which has the capability to provide the public with a vast range of new services such as the interactive multimedia, with speedier transmissions information retrieval, the third generation of mobile phones, or 3G, and the Mobile Internet and the Mobile Banking. NGN will serve as one of the platforms to implement His Majesty's Government's vision for an e-Government, to provide more benefits to SMEs in their efforts to create better business opportunities. This will also offer more ICT services to private and public sectors, in particular to the present and future generation to fulfill the country's ambitions of creating a knowledge-based society.

For the society, strategies are now being formulated to encourage them to regard ICT as an indispensable part of their lives. These strategies include human capacity building programs intending to equip them with the necessary ICT skills and knowledge. Our education system is undergoing a learning revolution to further strengthen human-capacity building. In this respect, efforts to provide a holistic education towards the production of quality human resources equipped with relevant skills in ICT have been supported by generous budgetary allocations.

For the business communities in Brunei, more opportunities for business expansion and development can be gained from broadband technology. E-commerce and online business transactions can be highly facilitated by this technology. With the wide network and scope available through broadband, prospects to flourish will always be there.

Certainly strategies and policies need to be formulated to encourage the usage and adoption of broadband among the public. In promoting the wide usage of ICT through broadband, we also need to emphasize certain factors which are also important in the development of e-society.

6. China

H.E. Xi Guohua, Vice Minister of Information Industry

As a developing country, China has made noticeable achievements in the development of information and communications industry. Since China's reform and opening-up in 1980s, the information and communications sector in China has enjoyed rapid growth. The number of telephone users is increasing every year from the previous millions and 10 millions to the current 100 millions, and a new leapfrog is achieved in every three years. The newly increased users for the past three years has reached 90 million, and last year, the number was more than 100 million. Our estimate for this year is that the growth rate will remain at a level of 100 million. By the end of this May, the total number of telephone users in China has amounted to 590 million, of which, the fixed line users are 290 million and the mobile users are 300 million. Broadband applications, such as e-commerce, e-government, e-education and

telemedicine are also developing rapidly. At present, the Internet and broadband access users in China have reached 90 million and 16.6 million respectively. Electronic information industry has seen rapid development as well and significant progress has been made in the areas of self-research and development, production and manufacturing, product exportation, with market scale last year reaching 1880 billion RMB and the export volume amounting to 141 billion USD. The information industry in China has now become a leading, backbone and basic industry in the national economy and is playing an increasingly important role in promoting economic and social development. At the same time, we are also aware that the overall level of information and communications industry in China still lags far behind the developed countries. The information technology application, resources development and coverage are quite limited, communications infrastructure in the rural and remote areas remains underdeveloped and "digital divide" is still quite an issue for us to address All these require our continued attention and commitments.

Asia-Pacific is not only one of the fastest growing and most dynamic regions in the world, but also an area where development is significantly under balanced and the gaps between the rich and poor remains prominent. In the area of information and communications, we have both the most developed and least developed countries in this region. The biggest challenge which we need to address jointly is how to seize the opportunity and to achieve faster development. In this regard, I'd like to share with you some of my perspectives.

First – Information and communications should serve to promote economic and social development harmoniously. A well-developed information and communications network infrastructure is an important basis for economic growth and built-up of information society. Today, with globalized economy and informatization, nothing can be achieved without a modern network. The Chinese government has always been attaching great importance to the development of information infrastructure and has established the world's biggest network, which connects the country and the world, and provides diversified services by using advanced technologies. It has become a broad platform for the wide application of ICT technologies.

Second – Promoting technology and service innovation in an active, pragmatic and market-oriented way. Information and communications is not only a hi-tech industry, but also a market-oriented service industry. In the process of development, technology and market factor depend on each other and interact with each other. But to a large extent, it's the market needs that play a deciding role. Nowadays, the information and communications industry in the world is experiencing a transition to the next generation network. New technologies like 3G, Ipv6, NGN, wireline and wireless broadband access are mushrooming in a dazzling way. Every country in the world is facing a more complex environment and difficult choice than ever before in terms of how to set its own course on the development of future network and technologies. We should therefore continue to adopt a market-oriented approach, keep close track of technology development and strengthen the government's guiding role on network evolution and industry development in accordance with specific national conditions. By formulating policies on the development of the industry, technologies and services, we should try to achieve integrity and coordinated development in the relations between technological advancement and applicability, service innovation and market application, and fast growth and healthy development, so that technological innovations can play a more active role in the development of the industry.

Third – Establishing a legally-based and highly efficient regulatory framework. The reforms undertaken in recent years in the information and communications industry of China proves to be very successful, as it has given the enterprises more vitality and contributed to the faster development of the whole industry. In this process, the most meaningful lesson we learned is that market opening and competition should go hand in hand with effective implementation of regulations. Regulation in this context is completely different from the one under planned economy. It is an administrative action guided by law and is a combined use of legal, economic, technological and administrative measures. Our experiences tell us that this kind of regulation is necessary and effective as well. To achieve faster development requires mutual cooperation; and to ensure efficient regulation call for mutual exchange of experiences. It's true that there are differences among different countries in terms of development levels, legal and economic systems, but we all share the same view on the need for regulation. China will actively learn from the good experiences and practices of other countries and will strive to improve its regulatory system, approaches and efficiency, with a view to create a just, fair, effective and orderly competitive market environment for the whole industry.

Fourth – Strengthening regional cooperation and achieving common development and prosperity. Economic globalization should contribute to the common

prosperity of mankind, and information society should be build up to promote the balanced development of all counties. One of the urgent tasks that Asia-Pacific counties are faced with is to further strength regional cooperation, bridge the "digital divide" and achieve common development. It is encouraging to see that, as a result of our joint efforts, great progress has already been made in this regard. The existing cooperative mechanisms like ASEAN, "$10 + 1$", "$10 + 3$" and "China-Japan-Korea" are moving ahead. The Chinese government has been actively promoting its exchange and cooperation with other Asia-Pacific countries in the field of information technology, services, regulation and HRD. For the next 5 years, China is committed to provide trainings for 500 senior and middle level telecommunication people of ASEAN countries and this plan is now under active implementation. We will honor our commitments under WTO in relation to the opening of telecommunication services market and will protect the interests of foreign invertors in China by law. We are also encouraging and supporting Chinese enterprises to "go overseas" and explore international business markets.

7. Fiji

Hon. Simione Kaitani, Minister for Information, Communications and Media Relations

Like other neighbors in the Pacific, Fiji is pursuing avenues to assist us in the development and growth of ICT. Recently, our Ministry of Information, Communications and Media Relations has signed an MOU with the Ministry of Information and Industries of the People's Republic of China with the intention of strengthening relations between the two States and establishing a broad cooperation in the development of their information and communication communities. We are currently pursuing with China the opportunity to develop our e-Government and to launch this as the flagship that will steer towards further development and growth in ICT.

There is also a major development in distance learning that is currently being progressed by the Government of Japan's JICA in the University of the South Pacific to further develop and enhance the Pacific Center for ICT and thereby improve the use of ICT in distance learning and research. In association with this development, the USP is currently working with the Ministry of Information, Communications and Media Relations on enabling direct linkage of the USP to the AARNet (Australian Academic Research Network) to facilitate in the provision of affordable broadband and higher speed connectivity between the two points and as a result better learning and research opportunities for regional students in the campus.

I believe that, through partnerships with other countries and agencies in the region and working to address our needs, our small Pacific developing states will be able to anchor themselves with our Asian friends and not be left drifting as isolated economies. In fact these partnership arrangements are in line with our "look North" policy. We are grateful to Japan, the People's Republic of China and Australia for the assistance to be provided through these partnerships.

The use of power line communication (PLC) or broadband power line (BPL) in Fiji is currently being explored and a pilot project on the use of PLC to facilitate in broadband communications will be launched later this year. The pilot project is aimed at ascertaining the suitability, effectiveness and viability of establishing, operating and enabling broadband Internet services via the PLC to specific points, for example schools, the rural area, selected Government offices and a medical institution.

Our national carrier, Telecom Fiji Limited is currently progressing the completion of a fiber optic ring around Viti Levu, one of our two main islands. This is a major component of the Fiji National Information Infrastructure (NII) development. The company has also invested in the establishment of satellite-based system to facilitate in extending basic communications and Internet access to rural areas throughout the country. Both these projects are private sector funded development activities necessitated by Government policy statements that are directed at the development of a NII and the addressing of inequity in communications access. This scenario illustrates Government/private sector joint cooperative partnership in developments that will generate benefits to our communities. I can only envisage the coordination of more such arrangements as we progress from here.

8. India

H.E. Dayanidhi Maran, Minister of Communications and IT

The Indian Telecom sector is clearly displaying the operation of market forces of demand and supply. The

sovereignty of consumers is evident through their revealed preference in favor of economically rational decisions. The major policy reforms undertaken through our National Telecom Policy (1994) and the New Telecom policy (1999) have resulted in the fastest ever expansion of the telecom network. In the last year, we have added nearly 22 million lines and Mobile connections grew at 160%. The entry of the Private sector and the Mobile telephones have been the principal drivers. Tariff levels have fallen significantly, and a mechanism is in place to rationalize it further keeping in view prevailing trends worldwide. A separate Universal Service Obligation Fund has been created to support the funding of universal access services.

We are all aware that information and communication technologies are reshaping the world and new technologies in this sector hold a great promise of enabling citizens to have better access to education, health, commerce and governance. The predominant use of the telecom services in most of our countries has so far been for voice communications. While economic and social value has been provided for voice, it has not unfortunately been so for data applications. We are aware that the major drivers of future growth in this sector are related to non-voice applications; namely, data communications, value added applications, broadband interactive services, e-services and a variety of innovative content applications tailored for different age groups and interests. Immense opportunities exist, which in turn open up a vast multitude of business opportunities for the different players.

In this context, Internet and Broadband access are widely recognized as catalysts for economic and social development of the country. Not only will these contribute to economic growth but would also enable the development of a vast pool of skilled manpower, far beyond the conventional training channels.

Having achieved a fair degree of success in improving our teledensity figures, we in India are on the threshold of launching a big thrust in respect of Internet and Broadband access. As part of our commitment to Universal access, we are providing High Speed Public Telecom and Info Centers (HPTIC) in all major villages, having a population of 2000 persons and above. We do recognize that our current levels of Internet and Broadband access are low compared to countries such as South Korea, Malaysia and China. Our Regulator, the Telecom Regulatory Authority of India, has recently made some useful recommendations in this regard and has also suggested a target of 20 million Broadband subscribers and 40 million Internet subscribers by the year 2010. We hope to craft our policy in this regard shortly. For the current year, we are working on a modest target of one million lines for Broadband access.

Another constraint is in terms of establishing the technical conditions for making Internet and Broadband services available in all languages. There are issues in terms of coding of major scripts into computer format and also for the scripts to be used in the Uniform Resource Locater (URL). As William Butler Yeats pointed out, we must “think like a wise man but communicate in the language of the people”.

Security network is an absolute sine qua non for the development of broadband facilities, particularly in the context of e-Commerce. There is need to provide for a secure and hassle-free environment.

We are impressed by the remarkable progress some of the countries in the Asia Pacific region have made in the provisioning of broadband services at affordable prices. The Mobile telecommunication systems for providing multimedia via high-speed network have considerable potential in the propagation of broadband access. We look forward to exploring possibilities of cooperation in R&D between India and other countries of the region in the fields of ubiquitous mobile telecommunication, spectrum management techniques, digital audio video broadcast and next generation terminal devices.

A proper regulatory framework would contribute significantly in the development of the Internet and broadband services. In India, we have a very effective regulatory mechanism with adequate checks and balances. In the context of our shared commitment to improve the Broadband facilities in the region, it would be useful to share our experience about the regulatory mechanisms and study the course of further evolution.

9. Indonesia

H.E. Djamhari Sirat, Minister of Communications

Telecommunication sector in Indonesia plays its role as the agent of Indonesian development. This position has drawn our administration to closely involve in the development of politics, economics, social, culture, defense and security of the country. In this light, the development of telecommunication sector is significant for the development of Indonesia as a whole.

On the other side, the success of this sector’s development in Indonesia would give a positive contribution toward the realization of our archipelago concept, while

all the supporting elements could in crease the service capability on national and international level in such away it will actively supports the national development.

To encourage the participant of the private sector as well as to widen market share and increase competitiveness, the government stimulates cooperation among Indonesian private sector and business people from other countries as well as APT member countries. In this respect, I appreciate the Thai Government to have this important meeting.

Several steps have been taken in Indonesia to bridge the digital divide and to bring into reality the goals of information into the knowledge based society. Initiatives including various programs, were undertaken by Government of Indonesia in cooperation with the business sector, educational institutions, and policy initiatives designed to promote E-leadership and to bring about information technologies are converging, Indonesia is also in the process of streamlining relevant regulations and institutions to effectively manage the operations and policies in the ICT related sectors.

Indonesia believes that ICT constitutes a primary national priority and an important tool to achieve economic and social development in most developing countries in general and Indonesia in particular. Indonesia as part of developing countries will fully associate itself for the success of the process of the second phase of the WSIS in Tunisia. Indonesia emphasizes that the outcome of the Tunis Phase should come out with a concrete initiatives at all levels to bridge the digital divide and to place information and communications technologies at the service of development.

10. Iran

H.E. Seyed Ahmad Motamedi

Islamic Republic of Iran has witnessed a drastic growth in its fixed phone penetration in recent years which is still pushing at the same rate. Having considered the future plans and the average size of the family, it is predicted that by the end of year 2004 the penetration rate of fixed phone per household would become 100 percent. Implementation of a fiber network to the extent of 28 thousand kilometers which has connected all cities has also created a perfect infrastructure for the development of Information Technology in my country.

Within the policies set by the government, development of infrastructural networks remains within the government and all other networks and services are privatized. The private sector involvement has been of great enthusiasm to the extent of creation of more than 700 private specialized companies licensed in different Information Technology disciplines and the demand is ever increasing.

As a result of this policy and the popular demand for the IT services, especially among the youth, there has been a huge increase in the actual number of the Internet users to 5 millions. As of now, the Internet access, development of local applications and the demand for broadband is growing at a high pace. Under the circumstances, utilization of DSL to provide users with a high-speed connection is inevitable. As it is the only choice to utilize the existing copper network infrastructure which is now connecting the potential users to the telephone network in order to provide users with broadband at the least price and within the shortest time. From this point of view, utilization of this technological solution and omni-lateral development of the service have become a national cause. By making use of all the potentials of the public and the private sector and through emphasizing and facilitating the presence of private sector and creating fair competition, it is planned to utilize the technology to provide broad-band services at a pace which keeps up with the growing demands.

By the end of year 2003, 13 private companies were licensed by the ministry of the ICT to provide professional data communication services internally known as Private Access Providers (PAP). As a commitment to the terms and conditions of the license they are to provide 300,000 cable DSL lines to the public and if added up to the commitment of the government companies, a total of 400,000 cable DSL lines are expected in service within the coming year.

In parallel to the growth of the Information Technology in urban areas, another plan entitled “establishment of 10,000 village ICT offices” is underway with an allocated budget of 250 million US dollars. One of the major obstacles on the way of the government to extend the long expected services to the rural areas has been the diversity and uneven distribution of 65,000 villages across a vast the country. In spite the fact that there are more than 40,000 villages with fixed telephone services and a penetration rate of more than 10 in these areas, comparing these figures with the national figure of 24 and 40 for the major cities, their share of 15.5 million fixed lines is unequal and yet the low access to the Internet reveal the gap to be bridged in these areas. Implementation of this plan in addition to access to fixed telephone and postal services would enable extension

Asia-Pacific Teaches The World About Broadband
by Yoshio Utsumi
Secretary-General, International Telecommunication Union

As everyone knows, youngsters always have new things to teach their elders. It is particularly appropriate therefore, that you have chosen "Broadband and ICT Development" as the theme for this event. The broadband industry, although it already reaches more than 100 million people worldwide, is still in its infancy in most parts of the globe. It is astonishing but true, that almost half of all broadband subscribers around the world are to be found here in the Asia-Pacific region. Truly, the Asia-Pacific is teaching the world about broadband.

Let us look at a few facts:

– In 2004, China overtook the United States as the economy with the most broadband subscribers worldwide;
– For several years, the Republic of Korea has had the highest level of broadband penetration of any economy in the world and, at the end of 2003, reached a penetration rate of 73 per cent of households with broadband;
– Japan has emerged as the world leader in the field of broadband delivered over the wireless spectrum, in particular through 3G mobile communications.

Broadband greatly enriches the experience of Internet users, especially those who enjoy playing multi-user games or peer-to-peer file sharing. The growth of broadband has been primarily demand-driven; seeing their neighbors with broadband, users want access to the same quality of experience.
But what does broadband mean for economic and social welfare? Is broadband just a consumer service, or can it serve the wider national economy?
I believe that broadband can play a vital role in promoting economic growth and in the development of new applications – such as e-government or traffic management – as well as benefiting individual consumers.
In the case of the Republic of Korea, for example, during the course of the last decade, telecommunication revenue as a share of GDP has more than doubled and now stands at over 4.5 per cent, or almost twice the global average. This boost to the economy has not come from telephone service revenues, which have declined over the same period. Rather it has come from new services, such as fixed-line broadband and high-speed mobile communications.

Here in Thailand, the Minister for Information and Communications Technology, Dr Surapong Suebwonglee, has established the ambitious target of having one million Thai citizens using broadband by the end of this year. In so doing, Thailand will be leaping ahead of many so-called "developed countries", including several members of the European Union and the OECD.

Broadband offers a series of different benefits that can help boost economic and social development. For instance:

- Always-on service and flat-rate pricing are essential for encouraging users to experiment and to innovate in the way they relate with cyberspace.
- Similarly, the higher speeds, convenience and reliability of broadband provide a platform on which to build confidence and trust in electronic networks, which is a prerequisite for e-commerce and e-government.
- Broadband offers the chance for small companies, entrepreneurs and people who work from home to benefit from a similar level of online performance to that enjoyed by big companies, universities or other large institutions.
- The combination of widespread broadband with e-commerce is stimulating the development of new business models and applications, such as video-on-demand or online sale of downloaded software, that were not previously viable.

In short, broadband opens up a vista of new possibilities which Asia, with its young, dynamic and well-educated population, is in an ideal position to exploit. To quote from the chairman of the APT Management Committee, Mr. Toshiyuki Yamada, "Broadband creates a totally new environment, overcoming the twin obstacles of time and space." I would therefore like to congratulate APT for choosing this topic for your ministerial meeting.

of government services, banking, vocational training and education through trained operators or assistants to the villages as well. The number of villages planned to be covered by the plan would reach 3000 by the end of 2004 which would be a giant step in easement of the rural deprivation and lowering of the migration to the urban areas.

In the course of the past year we also witnessed another successful experience in the Islamic Republic of Iran. The redefining and restructuring of a fully government controlled monopoly; a serious obstacle to development of the ICT in the country to a competitive environment has been a great achievement for the country. The new law passed during the past year has changed the visions and missions of the ex Ministry of Post, Telegraph and Telephone to the newly named Ministry of ICT. Also approved to establish is the new Regulatory organization which shall regulate the ICT market, activity of the private sector and foreign investment and strive to eradicate all forms of monopoly and unfair business behavior and render support to the newly born non-government entities and conduct arbitration among the parties involved. In this short time from its birth we have witnessed positive impacts on the market. The selection of the second national mobile operator with the foreign investment and issuing of 6 licenses to the private sector for development of fixed telephone are instances of practical implementation of the new policies.

11. Japan

H.E. Taro Aso

In January of 2001, Japan developed its national ICT strategy called "e-Japan Strategy." The goal of the Strategy is "Japan shall become the world's most advanced ICT nation by 2005" and therefore, Japan has been actively building both network infrastructures and implementing competition policies. As a result of such efforts we have already realized and almost achieved our goal for 2005: that is, a world's highest-speed and lowest-priced broadband platforms for users. Furthermore, the "e-Japan strategy II" was developed in July 2003 in order to focus on the promotion of actual use of broadband infrastructures. The goal of "e-Japan Strategy II" is "for Japan to become the world's most advanced ICT nation by 2005, and continue to be the world's most advanced ICT nation beyond 2006." To this end, both the public and private sectors in tandem have been working to attain the goal.

In addition, I have recently announced an initiative entitled "u-Japan." ("u" is an abbreviation of the word "Ubiquitous".) Under this initiative, new policy measures are included for construction of an invigorated Japan by 2010, which will enable active participation in our society by all people, from children to the elderly and also for people with disabilities. In the age where senior citizens are increasing and the number of children decreasing, the initiative aims to utilize ICT to make an environment where people who require nursing care can lead the same vigorous lives as those without. I expect that a new information society will be created through the realization of the ubiquitous network society, in which socioeconomic activities are supported by "networks available for anyone at anytime, anywhere." I believe that people in such a society will enjoy "sustainable economic growth" and a "secure and safe society." To this end, in collaborating with countries in the Asia-Pacific region, the Government of Japan will make efforts to realize the ubiquitous network society.

Currently, although the trade volume between Asia, North America, and Europe is almost balanced, the volume of information transmission between Asia and

North America, Asia and Europe, are smaller than that between North America and Europe. The Asia-Pacific region, with its huge population and cultural diversity, shows immeasurable potential for growth. Accordingly, it is necessary for us to transmit information from the Asia-Pacific region ourselves. This will enable us to turn ourselves into a world information hub as well as the industrial hub in this 21st century. To this end, in March 2003, MPHPT developed an action plan to realize the "Asia Broadband Program" upholding goals for preparing a broadband environment in the Asia-Pacific region. MPHPT has already begun specific activities in this region, including the "North-South Submarine Fiber Optic Cable Link Project" in Vietnam which connects 2000 km from north to south by fiber optic cable. In addition to the network infrastructure, Japan has been making efforts to promote broadband applications and human resources development. I am confident that the promotion of this Program will contribute, not only to the development of the Asia-Pacific region, but also to the future development of other regions, as a model for international harmonization in the ICT field.

The Government of Japan holds the view that the role of APT is significant in making the Asia-Pacific region an information hub. Japan will further continue to contribute to invigorating APT activities. Specifically, I would like to propose three support measures; namely, first, is an increase in human capacity building; second, support for international joint research projects; and, third, support for pilot projects including tele-centers in rural areas. These support measures will be accorded higher priorities in implementation. With regard to training courses, I am aware of the importance of Human Resources Development (HRD). In addition to the existing technical courses, MPHPT will employ new fields such as ICT policies, broadband, security and e-Government. Furthermore, MPHPT will, not only receive trainees into Japan, but also will actively introduce distance learning, or e-education, and hold seminars in countries in the Asia-Pacific region, to enable as many people as possible to participate in the training courses. In implementing ICT researcher and engineer exchange programs for fostering advanced researchers in the ICT field, MPHPT will actively add new programs focusing on broadband as themes. This will further thereby contribute to the development of broadband in the Asia-Pacific region. Aside from those efforts, since the narrowing of the digital divide is still a very important matter to be solved, MPHPT will carry out activities to support pilot projects such as rural telecenters, as part of efforts to ensure accessibility in rural areas. I strongly hope and recommend that these activities will be included in the Bangkok Agenda which will be adopted tomorrow.

12. Korea

H.E. Chang-Kon Kim

Korea is one of those countries, which successfully embraced ICTs. Until the early 1980s, Korea's teledensity stood at a mere 7.2%, but now it has jumped to 50% and the mobile penetration rate reached 74%. Furthermore, 74% of the total households has a broadband Internet connection. These figures well demonstrate the fact that Korea has one of the most advanced broadband infrastructure in the world.

In the meantime, it is quite interesting to note that the development of Korea's ICTs, which took only 20 years to achieve, has coincided over time with the growth of APT. This leads one to ask "what are the success factors behind these developments?"

Most of all, there was a strong government policy push and efforts to create a competitive telecommunication environment. That had the effect of inducing more active investment by telecom operators and accelerated competition in the delivery of services among providers.

In continuation of such a growth momentum, the Korean government set out a future direction as well. For instance, by 2006, the Korean Government will provide broadband Internet as a universal service. And by 2010, the Broadband convergence Network(BcN) will be deployed, ensuring the speeds of 50 to 100 Mbps, and Quality of Service (QoS).

As you well know, the rapid development of ICTs heralds the era of digital convergence, which incorporates the services of voice and data, wired and wireless, as well as telecommunications and broadcasting. In this new digital age, the evolution of the BcN will bring in fundamental changes in the business environment of telecom service operators, and require a new paradigm shift in the regulatory policy.

Not only that, information security issues concerning personal data protection and network security will hold of greater importance, while the widening digital gap between information "haves" and information "have-nots" will become a more serious problem.

The digital divide that I have just mentioned is not an issue affecting a single country, but an issue that goes beyond national boundaries. In this context, the

1. Introduction

APT Bangkok Agenda for Broadband and ICT Development in the Asia-Pacific
The Bangkok Agenda confirms the need for initiatives at national, sub-regional and regional levels for: (a) raising awareness, capacity building and human resource development; (b) creating an enabling environment to encourage investment; (c) improving access and encouraging broadband and ICT usage; (d) increasing confidence and security for broadband and ICT usage; and (e) strengthening international cooperation. In addition to the agenda, a list of implementing actions by each Asia-Pacific Economy as approved. The following are excerpts from the Bangkok Agenda text.

2. Raising Awareness, Capacity Building and HRD

Human resource development and capacity building in ICT are vital for the diffusion of broadband and ICT in the Asia-Pacific region. Due to the large population and a high rate of illiteracy in some areas, the challenge of HRD and capacity building is formidable. A key role for APT is to continue its support to members with expert missions, training programs and other activities to promote HRD and capacity building in the region.
While the process of bringing the people to the classroom should be further accelerated, in order to meet the high volume of skilled people required, HRD strategies must bring the classroom to the people especially in the least developed areas of the region. New strategies are required to assist APT members in the development of a pool of experts that will be needed.
With increasing availability of online training resources, the APT will need to be alert to opportunities to harness the very medium we are endeavoring to create. Training courses from the members and locally generated courses should be made available where appropriate to members using off and on line approaches. A careful evaluation of the effectiveness of the various methodologies is required. It is also important to ensure that the less developed members are not disadvantaged by focusing educational resources on the use of technologies not readily available.

3. Creating an Enabling Environment to Encourage ICT Investment

Governments need to provide the necessary policy and regulatory environment for encouraging investment, for ensuring fair competition and for promoting universal access, encouraging the business sector to play a more active role in the development of network infrastructure.
The development of network infrastructure including broadband infrastructure requires strategic leadership. A sound policy, regulatory and institutional framework, is required to increase confidence for the major investments needed for broadband network development, giving due consideration to the requirement of service providers and end users for appropriate technology support and confidence in network security.
Governments should also promote dialogue among network operators, suppliers and major users to identify opportunities for extending network infrastructure in underserved areas and for enhancing the capability of existing networks to deliver broadband services. A range of technology options is already available and is being developed for the delivery of broadband and ICT services. With falling equipment prices and new technology options, it is possible to develop infrastructure at a lower cost than previously. Interoperable standards throughout the region would also be beneficial.
Rapid advances in radio technology call for a greater emphasis on the efficient utilization of spectrum. This in turn can be assisted by regional cooperation, facilitated by APT.

4. Improving Access and Encouraging Broadband and ICT Usage

Although the need to provide universal and affordable access has been fully recognized and has been accorded a high priority by many member countries yet in some cases the extension of networks has been slow. Some APT members have been successful in developing effective market based approaches to extending the reach of networks. However, even where the market is able to work effectively, some areas will remain underserved due to a lack of supporting facilities and financial resources. Governments therefore need to continue to support Universal service arrangements.
Delivery of practical applications of “e-services” through broadband will sharply increase the traffic and bring the prices down and will provide further incentive to develop the network infrastructure. The development of e-services including broadband access in rural areas should also be encouraged.
With social and economic development, increasingly ubiquitous broadband access will benefit society through enabling the delivery of more convenient and efficient services including e-government, e-commerce, e-education and e-health.
APT member countries have also seen a huge uptake of wireless and satellite technologies and innovative applications of mobile services.
Progressive satellite and other rural networks can provide services on a commercially viable basis. A greater emphasis should be laid on research and development to develop appropriate cost effective broadband technologies for rural applications.
On the other hand, the Asia-Pacific region has the potential to become the largest market and the world manufacturing hub for telecommunication and ICT related equipment. This can be supported by strengthening collaboration in R&D, software development, standardization, technology transfer and competitive supply of services.

information gap is an important agenda that we have to collectively address with great attention, as it is one of key factors that determines the quality of human life in today's world, and in that of the future.

In this regard, it is quite meaningful for the APT to hold the regional IT ministerial meeting under the theme of broadband and ICT for the co-prosperity of the member economies.

I hope that all the residents in this region can grab the digital opportunities, and the substantial benefits of advanced technologies are fully felt across the region. With this vision and goal in mind, let us promote close cooperation on the basis of solid mutual trust.

13. Lao PDR

H.E. Bouathong Vonglokham, Minister of Communication, Transport, Post and Construction

We are all aware that Asia – Pacific is a large community in the world and has different levels of economic development ranging from the least developed to the developing and the most developed countries. Lao PDR is among the least developed countries in this region and is facing many challenges in sustaining its rate of growth and development.

Since ICT is playing an important role to support the economic and social development, the Lao Government gives very high priority to this field and has taken several major policy initiatives consistent with the New Economic Mechanism.

The New Economic Mechanism of the Lao Government focuses on three key means of stimulating economic growth namely:

- privatization and decentralization;
- the promotion of international trade; and
- the encouragement of foreign investment.

The telecommunication policy framework has been developed in the context of Lao's national causes and its political, economic and social objectives consistent with the New Economic Mechanism. Lao's telecommunications sector policy objectives are designed to provide the basis for the sustained improvement in the performance of Lao's telecommunications sector. Moreover, the policy objectives are designed to guide the development of Lao's telecommunications sector over the medium term.

Lao's telecommunications policy objectives are:

- To increase the deployment of national telecommunications infrastructure especially in regional and remote areas of the country;
- To provide a financially viable telecommunications sector conducive to sustainable investment in telecommunications infrastructure by the private and public sector as well as aid agencies;
- To improve the efficiency and effectiveness of telecommunications service delivery to end users;
- To cost effectively satisfy end user demand for telecommunications services at affordable prices; and
- To strengthen regulatory capability and skill sets within Government so as to ensure a high standard of sector governance and oversight of market participants.

With regard to Lao's broadband infrastructure an optical fiber transmission network backbone has recently been commissioned. This provides 1,780 kilometers of fiber linking all the major population and trading centers of the country. This network will support high-speed communication and the extension of the provision of broadband services. In the future this network will provide the basis for creating a countrywide network of telecenters which will provide communities throughout Lao with access to a full range of ICT services.

The government is also committed to the establishment of a national Internet Exchange designed to optimize Lao's international bandwidth requirements. The government will soon commence a process of consultation with industry to determine the best option for Lao.

The results of the APT Ministerial Conference on Broadband and ICT will significantly contribute to the development of information infrastructure and boosting the special relationship among telecommunication sectors of the region as a whole.

14. Malaysia

H.E. Dato' Shaziman Abu Mansor, Deputy Minister of Energy, Water and Communications

The availability of communications infrastructure is necessary for access to information and applications for social and economic advancements. Advanced communications infrastructure is now considered as a key indicator in determining a country's competitiveness level.

Both broadband and narrowband technologies require connectivity as part of a global network, rather than as isolated information and communication islands.
Special measures will be needed to ensure the connectivity and the flow of information transcending language and other barriers. At the same time, attention should be paid to creation of contents in local languages by use of appropriate software and other tools.

5. Increasing Confidence and Security for Broadband and ICT Usage

It is prerequisite for the development of the Information Society to increase confidence and security in the networks. Guarding people from cyber attack and spam mail, protection of personal information and privacy should be priorities in building a network infrastructure. Further, in order to achieve economic benefits from e-commerce, governments should be aware of needs to ensure legal environment for facilitating implementation of e-commerce and preventing cyber crimes over e-commerce. Additionally, appropriate protection should be ensured for intellectual property rights for contents traded over the networks. The issues of confidence and security in the networks, most of which are interconnected by the Internet transcending geographical borders, require to be dealt with at the international level. Thus, cooperative activities among APT member countries as well as between APT and other regional or international organizations are required.

6. Strengthening International Cooperation

One of the strengths of the APT is in the diversity of its members and the key to harnessing this strength is cooperation between members. Those countries that have already implemented broadband networks and innovative ICT applications can assist members who are now at the initial stage of implementation programs through information sharing, training and other related activities.
Harmonized standards will facilitate the manufacture and supply of hardware and software throughout the region, with economic advantages flowing also to members that are not in a position to manufacture their own hardware.
The APT as the prime regional telecommunications organization in the Asia-Pacific region should play a pivotal role in facilitating international cooperation among its members, and effective collaboration with other international organizations.
Considering the geographical challenges, vulnerability to environmental hazards, relative isolation, small market size and other disadvantages, special attention should be paid to the needs of the Small Island Countries, Land-locked Least Developed Countries and other LDCs.
Regional and international cooperation can help countries in using ICTs as an effective development tool, in line with individual country development plans and priorities, as can further support from the international financial institutions. In this regard, we encourage all developing member states of the Asia-Pacific Telecommunity who have not done to so raise the relative priority of ICT projects in requests for international cooperation.

Malaysia recognizes that broadband infrastructure has the potential of bringing significant economic and social benefits to the country. However, we must also take cognizance that although the availability of an advanced communications infrastructure can enrich the community served by such infrastructure, the uneven distribution of it can further aggravate the already existing digital divide. Hence careful planning and policy formulation must be made to ensure a balanced and equitable broadband implementation program.

Applications of the k-economy like e-healthcare, e-learning, video conferencing and other new, value-added services are not feasible over narrowband and demand higher bandwidths. To cope with such demands and to bring the country forward in today's global economy, the Malaysian government is formulating the National Broadband Plan, which should set the framework for broadband implementation in the country. We believe that such infrastructure is necessary to meet the national aspiration of developing a k-based society and to help accelerate the rollout of the MSC flagship applications and other government applications thus improving the efficiency of the public service delivery to citizens and businesses (g2c and g2b).

In Malaysia, the availability of infrastructure at the last mile is still limited compared to the backbone level. It is envisaged that without government intervention, the broadband penetration in Malaysia would still be below 10% over the next 5 years. As such, strategies are needed to boost up broadband usage among the population. In order to create a critical mass, the Government needs to play a proactive role in the first few years starting 2004 to about 2006. It is projected that by 2006, we should achieve a critical mass equivalent to a penetration rate of 5% which is required to attract industry players to rollout infrastructure at the last mile level.

The government has identified strategies to promote broadband development, which include the aggregation of bandwidth demand for the public sector, the stimulation of supply through incentives to the service providers and the formulation of conducive policy and regulatory frameworks to intensify competition and collaboration at the last-mile. The thrust of the

National Broadband Plan is to provide broadband connectivity to communities such as government departments, schools, universities and research institutions, hospitals and clinics, trade communities and Community Internet Centers. It is our hope that with the National Broadband Plan, we will achieve an overall penetration rate of 10% or a household penetration rate of 50% by 2008. This broadband connectivity can also be expanded to connect communities in APT countries through collaboration in networks. An example is connectivity in the areas of education and research with the availability of the SEA-REN network.

15. Maldives

Hon. Midhath Hilmy, Minister of Communication, Science and Technology

In an archipelagic nation like the Maldives, where geographical dispersal and isolation constrain development, info-communication technology has the potential to bring people closer together, and accelerate socio-economic development.

However, coupled with the thin population density, these factors continue to pose significant challenges to providing cost-effective means for international and nationwide broadband access. The small economies of scale do not justify the introduction of the highly expensive submarine optical fiber network needed to achieve that objective. Regional cooperation is vital if all of our countries are to become members of this regional and global broadband family.

The government is keenly aware of the significant role that ICT can and must play in advancing the attainment of the Millennium Development Goals and the targets of the Maldives Vision 2020. The Maldives Telecommunication Policy 2001–2005 calls for providing affordable and equitable access to ICT and increasing awareness of the benefits of ICT to the people. Under its guidance, Internet service was liberalized in mid 2003 while mobile service will be opened at the end of this year.

The Maldivian Government has recently embarked on an ambitious project to strengthen the ICT capabilities and access. The project will connect all government organizations in the capital using a broadband technology and will be extended to the 20 atoll capitals using available bandwidth from the carriers.

Telecommunications has drastically reduced distances and has helped to create an inter-connected global economy. We should all work together to providing support in realizing the plans of action that was agreed in the World Summit on Information Society. The basic ingredients to realize this worldwide information infrastructure, we believe, is the availability of good quality telephone services and bandwidth at affordable rates.

To meet the challenges of the information age, the benefits of new telecommunication technologies must reach all of us, without a digital divide. APT must continue to provide forums for coordination, information exchange, discussions and harmonization of national, regional and international telecommunication policies.

16. Myanmar

H.E. Thein Zaw, Minister for Ministry of Communications, Posts and Telegraphs

Today, we are living in a time of rapid changes in technologies, particularly in the Broadband and ICT Development. The Broadband network information systems for the economic globalization has become the main trends around t he world and it existence affect the economic situations. We realized that in our region, the information infrastructure is developing rapidly and as Asia is one of the most economically dynamic regions, we have the common desire to promote regional cooperation and common development.

We like to emphasize again how Broadband and ICT Development is important in our region as they are the primary engine for economic growth. The ICT plays a crucial role in accelerating economic growth, promoting development, eliminating poverty and facilitate the economic integration into the global market.

May I explain the current position of Myanmar's Information and Communication Technology development? The Government of Myanmar has established the ICT Development Council, chaired by the Prime Minister. The focal point of the Council is the e-National Task Force, chaired by the Minister for Communications, Posts and Telegraphs. We have taken measures to improve the domestic and international links, Broadband access and Internet access in terms of density and coverage. Myanmar with an area of 676,577 square kilometers with a lot of mountains and rivers that make difficult for the telecommunication infrastructure development and over fifty two million people with 75% the population live in rural area. For the ICT sector the two ICT parks one in capital city

Yangon and the other one in Mandalay are already established and also IT sector is rolling in the private sector.

In Myanmar, the availability of last mile infrastructure is still limited compare to the backbone level but we are concentrating on telecommunications penetration to be covering countrywide. Establishment of new digital microwave routes, new mobile system, satellite communication, national fiber network, international fiber network are the continuous attempt for increasing teledensity as well as high speed Broadband networks. Myanmar has signed the e-ASEAN Framework Agreement and as a member, we have committed to implement the necessary steps according to the Agreement. The present status of Myanmar still have gaps compared with the developed member countries, but the impact of a lot of projects and initiations, future Myanmar will have the rapidly development of ICT.

17. Nepal

Mukunda Sharma Poudyal, Secretary of Information and Communications

His Majesty's Government of Nepal is committed to providing better and affordable communication services to all the citizens of the country. We have already revised our Telecommunications Policy, which I believe paves the way for active and effective role of private sector and the civil society in providing the best and affordable Telecom facilities in each and every nook and corner of the nation. The policy encourages foreign investments of up to 80 percent in the telecom sector and custom relief in imports of telecom equipments to be installed in the rural areas. There is provision of tax relaxation in the policy for small entrepreneurs investing in the rural areas.

Giving priority to the rural areas, we have already granted permission to a private operator to establish and operate basic telephone services in each of 534 village development committees in the Eastern Development Region of the country. Likewise, another private operator has already started providing telecom service in Kathmandu valley and is expected to expand the service gradually in the other parts of the country. Similarly the incumbent operator – Nepal Telecom – is expanding its existing facilities with an aim to provide telephone lines on demand in urban areas as well as speedy expansion of telecom services in the rural sector. Various private operators are providing Internet and other value added services in the country. The number of people visiting cyber cafes is increasing these days. Cable operators are also permitted to provide Internet services. The Government is also giving emphasis in establishing telecenters in various places across the country. We have an independent telecom regulatory authority – Nepal Telecommunications Authority, which is working hard to create a conducive environment to implement the policy effectively.

At present there is an urgency to enhance the access of the mass to the ICT so that they can do things in an efficient and cost effective manner. Keeping this in view HMG of Nepal has a plan to establish 1500 rural ICT centers in order to provide communities with shared access to ICT. Our newly pronounced Telecom Policy recognizes the ICT as a dynamic tool for effective service delivery and socio-economic development process. HMG is to bring ICT friendly separate policy in near future. All these endeavors are dedicated to establish our country itself as the part of information-hub in South Asia. We are going to add another milestone in our telecom infrastructure in near future – the East-West Optical Fiber Project (EWOF) which connects 850 KM long voice and data transport network serving as a backbone for signal transmission. We take this as information super highway nearing the completion with the grant assistance from the government of India. This state of the art, broadband technology not only provides a cheaper option and alternative route for International telecom traffic but also provides better TV and Radio transmission links within and outside the country including the transfer of huge amount of data. I take benefit of this forum to request our friendly countries for affordable access up to the nearest point of submarine optical cable to get the connection around the globe.

I mentioned some of the examples of how His Majesty's Government of Nepal is considering the importance of Broadband and ICT in its national policy and programs. We, in Nepal intend to make the best and effective use of ICT in every field of socio-economic development such as commerce, education, health, learning etc. Despite the efforts on our part, we need support and assistance from advanced member countries of this region and APT itself as financial and technical support in this sector since it is well known to all that carrying out such massive task is not an easy job for a mountainous, landlocked country like Nepal.

18. Pakistan

Shahid Farooq

With a population of almost 150 million, Pakistan offers one of the largest volumes of ICT users in the world. Its teledensity is under 3% which puts it much behind the world average of over 17%. Basic ICT services presently available in the country includes Advanced Toll Free Service (0800), Premium Rate Services (0900), ADSL Broadband and Data Services, Cable TV and broadband services, International and domestic Call Centers.

Following the trends in the rest of the world, Internet users have increased from less than 50 cities in 1999, to more than 1900 town/villages across the country. Similarly the cellular sector has seen a growth of over 500% during the past five years. Availability of digitalized Telecomm network infrastructure, including redundant countrywide Fiber Optical network connectivity to 400 cities on 10 Gbit DWDM technology has provided much needed bandwidth requirements. Rural area services have been facilitated through a Public-Private sector partnership utilizing a GMPCS service and also through a reduction in the fixed telephone installation charges for the rural areas by almost 400% this year.

The Deregulation policy of Government of Pakistan aims to accelerate the expansion of the ICT infrastructure to the far-flung areas of the country by having operators obligations to:

- Roll out an average of 83,000 new lines annually in the rural areas by incumbent operator.
- An Access Promotion Charge (APC), to be paid to the Local Loop Operators from a portion of the LDI operators incoming international calls revenues.
- A universal Service Obligation charge, designed to ensure that un-served or under-served pockets of population receive adequate service. This USO mandates that operators are required to pay 1.5% of Revenues, except incumbent which has roll-out obligations. In addition, portion of revenues on International calls terminated on mobiles will also be given to the USO fund.
- Two new mobile operators (making a total of six) will start rolling out their services by the end of this year, stimulating further price reductions and rapid spread of the services into the far flung areas of the country.
- About 80 companies have applied for the licenses for the provisioning of fixed line local loop telephony across the country, which means delivery of services at that cheaper prices and entry to the high populated and underserved rural areas of Pakistan.
- About 20 companies have applied for the provisioning of countrywide LDI services.

Therefore, the year 2004–2005 promises to be a year of dramatic growth in the ICT services in Pakistan.

Another important objective of the Government of Pakistan is to provide Broadband services in the country at affordable prices. The Government will shortly be publishing a policy for the facilitation of Broadband in the country, for which it has already appointed a task group of experts from Pakistan's ICT sector. It is planed to deploy over 100,000 multimedia and broadband connections in the country by the incumbent. The incumbent will deploy state of the art and cost efficient technologies including xDSL, xFTTH, Wireless and HFC to deliver affordable and high speed services to the corporate and consumers across the country.

Despite the great strides which ICT sector has taken and is expected to take in next one year, we are neither complacent nor ignorant of the great challenges which lie ahead like all other development countries Pakistan equally suffers from lack of quality, infrastructure, lack of content and above all human resource. Pakistan strongly advocates pooling of all recourses available with Asia Pacific countries for the development of human resources and research and development.

19. Papua New Guinea

Puka Temu, Minister for State Enterprises And Information

Almost everyone in the developed countries have access to ICT, whereas in many parts of our region, particularly in the Pacific Islands, the overall fixed line telephone density is less than about 10 to 100 inhabitants while Internet, Computers, and Television are available to a only handful of elites and urban dwellers.

The challenges to development are numerous to these countries. Many of them are still confronted with the challenges of providing the basic necessities of life such as food, education and health care services. Furthermore, social infrastructures like schools, roads, hospitals, electricity, etc needs to be further developed.

Our countries are, however, endowed with natural and human resources which we can develop with international support and cooperation to move us forward in our socio-economic progress. While faced with these challenges, we are also confronted with the digital revolution. We are, therefore placed in a very dicey situation, i.e. how to share the meager resources between

the basic necessities of life and provision of ICT infrastructure. This situation underscores the need for concerted efforts at national, regional and international levels to address the imbalance and the challenges of development.

The advances of broadband technology holds great potential however, significant resources are required to implement them and market needs to be developed sufficiently to ensure their sustainability – conditions which are yet to mature and to be fully developed in many developing countries particularly in the Pacific.

Despite these difficulties, PNG is making considerable efforts to addressing these problems. The most significant being the Privatization Policy of Government's telecommunications assets with emphasis on Public-Private Partnership. In this connection, a major part of the privatization policy is providing access to basic telecommunication services thus the Government has built into the privatization policy the obligations for providing connectivity to the rural and isolated communities. This policy is aimed at the provisioning of basic telephone service within the reach of rural communities over a period of time – particularly to rural and remote citizens and communities.

On infrastructure development, Telikom PNG, the state owned carrier, continues to modernize and upgrade our telecommunications infrastructure and plans to roll out further broadband services later this year. It also installed a digital mobile network late last year and is experiencing unprecedented demand for this service to the extent that mobile subscriptions have now reached 50% of fixed subscriptions in under 6 months. Telikom PNG has further announced recently a major initiative that will provide connectivity to many of our rural and remote communities including outer islands and isolated communities through satellite based solutions over the next few years.

The Government is also continually seeking to create an enabling policy environment especially in the areas of transparency and good governance. Government also intends to review the current policy on ICT the "National Policy on Information and Communications" (NPIC) that was adopted in 1994. The review will be undertaken to ensure that the NPIC is updated, given changes in technology and market demands.

Putting in place relevant national ICT laws and policies is a key building block to meeting the challenges of ICT. It is envisaged that the NPIC is linked to the Government's National Medium Term Development Strategy and other key policy initiatives including Export Driven Economy, Good Governance, Human Resources Development and Poverty Eradication.

Our Government further recognizes that there is an urgent need to take ownership of ICT and to provide effective leadership thus it has created the Department of State Enterprises and Information with responsibility for ICT policy development, oversight, implementation and awareness.

In addition, our Government has amended the Telecommunications Act and enacted a new legislation to give direction to the telecommunications industry and create investor confidence in the economy. An independent economy wide regulatory body has been established with powers to operate without interference. The economy wide regulator has responsibility for economic and consumer protection mandate while the sector specific regulatory authority has been retained although its functions are confined to technical regulation in particular technical standards, spectrum and numbering resources management.

Our government will continue to put in place initiatives aimed at creating the necessary enabling environment to give comfort and to reassure not only of the rich market of over 5 million people in Papua New Guinea but of their safety of investment and integrity of the key institutions in moderating their invention.

To complement these initiatives, the assistance and cooperation of our development partners and the international community is imperative especially in the areas of capacity building, technology transfer, infrastructure development particularly establishment of telecenters, broadband infrastructure development, to name a few.

It would be remiss of me not to acknowledge the technical assistance program of the APT which continues to be very beneficial to our economy. Notwithstanding this the existing digital divide, which may be further widened by the advances of technology, calls for renewed commitment to the WSIS declaration of principles and full implementation of the action plan. Papua New Guinea therefore welcomes this Conference as a regional effort "to build a people-centered, inclusive Information Society where everyone can create, access, utilize and share information and knowledge; enabling individuals and communities to achieve their full potential and improve their quality of life in a sustained manner". We found these interactions with the member countries very rewarding.

20. Philippines

H.E. Virgilio L. Pena, Chairman, Commission on Information and Communications Technology

Across the region, the availability of ubiquitous, reliable, high-speed broadband is changing the way people work and live. Computer penetration, Internet and mobile access have grown remarkably. The Internet and wireless technology are creating new lifestyles and work styles, particularly with the younger generation. What is interesting is that in addition to the aggressive and creative marketing efforts of the industry, the growth has been fueled by the independent interests of the younger generation in each country. Asia is seen as the most dynamic area in terms of the expansion and change in ICT services.

Despite these remarkable developments however, APT still needs to confront a great challenge and responsibility: ensuring that developing and least developed countries in the Region as well as individuals living in remote and rural areas are not left behind in enjoying the benefits that this digital opportunity offers. The Information Society must not leave anyone behind. The information infrastructure we build will be relevant only to the extent that it is universal, affordable and provide meaningful applications for communities and consumers of Asia and the Pacific to improve their lives and uplift them hunger and poverty.

In the Philippines, about a decade ago, owning a phone in one's home and being connected to the rest of the world were things that ordinary Filipinos could only dream of. Now, having one even outside his home has become a reality for many. In the fixed line service, the number of phone lines installed as of end-2003 were 8.09 telephones per 100 people from less than 1 per 100 a decade ago. Subscription to these capacities, however, have not achieved expectations, due primarily to the phenomenal growth of mobile telephony. Mobile teledensity last year stood at 27% from 2.37% more than five years ago. Last year, mobile phone subscribers numbered almost 23 million, a 46% increase from the 15 million registered subscribers in 2002. SMS has been the key driver to this growth with daily transactions estimated to be 180 million messages.

At present, there are more than 200 registered Value Added Service Providers offering among others, Internet and broadband services. Based on latest estimates, there are 4 million users of the Internet in the country. High speed Internet access, via cable modem, ADSL (Asymmetric Digital subscriber Line) and fixed wireless broadband systems is available. There are aggressive efforts by industry to pursue broadband services to businesses and households, including Wifi capabilities, but primarily focused on major urban areas and not enough on rural and remote communities. There are 19 registered operators of broadband services with an estimated 125,000 subscribers. The Philippines expect continued reductions in new fixed line applications; however, the good performance of the wireless segment is expected to continue and with increased affordability of wireless services, penetration rate is expected to reach between 33% to 40% by 2005.

The Infrastructure capability has been classified by the META group as "developing with high potential". More than 340 GHz of capacity connects the country to the rest of the world. They serve the country's requirements including the needs of more than 50 Contact Centers and BPO providers now operating in the country and have made the Philippines a major outsourcing destination.

The creation of the Commission on Information and Communications Technology (CICT) by executive mandate on January 12, 2004, as a precursor to the establishment of a Department or Ministry, has placed existing agencies of government responsible for IT and Communications under one body. These include as attached agencies our Regulator: The National Telecommunications Commission (NTC) and the country's Postal Services. Under the Office of the President, this cabinet level Commission will have the task of initiating, harmonizing and coordinating all ICT plans to ensure consistency with national goals and objectives.

CICT will lay the policy and legal framework for a level playing field in the sector. It shall promote strategic alliances with foreign investors, provide balanced investments between high growth and economically depressed areas, and set guidance for strategic, reliable and cost efficient ICT infrastructure, systems and resources in line with the constitutional recognition of the vital role of communications and information in nation building.

The country's broadband deployment strategy is anchored on three major components: 1) providing public access points to all our rural communities, 2) providing broadband capabilities to connect these access points, and 3) developing content to ensure sustainability through their utilization.

While past policy and regulatory strategies improved the country's teledensity and connectivity for rural Philippines, CICT has drawn concrete and targeted set of programs, among them, is the standardization of public access points through the installation of community e-centers (CEC) designed specifically to assist rural deployments.

Aligning ourselves to the WSIS goal of connectivity, we have set our target at deploying Community eCenters in all our 45,000 villages by 2015.

It is placing a high priority on making sure that Filipinos living and working in rural communities have access to the same kind of high quality infrastructure that is available in urban Philippines. It looks at E-Government, or the delivery of government services online as a major source of content to fuel the utilization of these CECs. An e-government fund has been set aside to develop citizen centric systems delivering both national and local government services through the CECs. Similarly we are seeking the initiatives of private industry to develop e-learning content as applications which can be accessed by remote public schools and marketplaces for farmers, fisherfolks and SMEs in these communities. With an E-Commerce Law in place, the country has been placed in the global stage of major ICT players. The CICT further hopes to build on the dynamic partnership and synergy that exist amongst the country's multi-stakeholders in the critical role of addressing new challenges and triggering e-strategies to move things forward.

21. Samoa

Hon. Palusalue Faapo II, Minister of Communications and Information Technology

As part of its economic and public sector reform agenda, Samoa, with the assistance of the World Bank, has started its Telecom and Postal sector reform project. This involves policy and legal reform, introducing competition and opening the cellular mobile market, and putting in place the proper regulatory framework for the development of this fast growing sector.

For a small island developing state with a population of 176,500, we face the same problems and difficulties like our other neighboring island states. However, through partnerships with regional and international agencies we have managed to progress to where we are now. We have one fixed wireline and international operator, one cellular mobile operator, and three Internet Service Providers.

The Information and Communication Technology sector has witnessed positive developments in the last two years. The number of fixed and cellular customers grew substantially. At the end of 2003, there were over 22,000 combined subscribers to fixed and mobile services, against a forecasted figure of 15,000. There have been major developments in the area of expansion of the network infrastructure. The telecommunication operator, SamoaTel, had started offering Wireless Local Loop service using GSM technology, in areas that previously had no service, and has also contributed to the improvement of access in rural areas.

SamoaTel's backbone is the Broadband high capacity network, which distributes telephone and data services around Samoa. The backbone network is fully digital and is made up of a combination of underground fiber optic cable and digital microwave radio. Data circuits are being added at an increasing rate driven by the development of ICT in Samoa.

Internet capacity was increased by 50% in the last year to cater for the growth. However, due to continuous growth and demand, a new satellite dish is currently being installed to provide greater Internet capacity (almost double current capacity), and to provide a second international link out of Samoa. With three ISPs offering competitive prices, there has been a significant increase in the number of people with Internet and email access. SamoaTel's efforts in extending basic telephone service to the rural areas will result in even higher growth in Internet access and usage.

In today's information age ICT has become essential to Samoa's ability to be a player in today's global economy. Whether we like it or not, the fact is, ICT has changed the way we do things and the way we live.

We believe that ICTs can be used as a tool for promoting economic, social and cultural development.

The Samoan Government has undertaken the challenges that have resulted from the above adversaries. A Cabinet appointed National ICT Steering Committee (SICT), was set up to develop and advise Government on ICT policies and strategies in moving ICT forward.

Our Government has also recognized that ICT is a tool that once utilized, will allow Samoa to bridge the digital divide, thereby reducing the barriers of distance, moving Samoa towards the knowledge economy and the information society. The benefits for our people include but are not limited to:

- reducing distribution costs,
- increasing markets for local products,
- cheaper and faster communication,
- providing meaningful information for decision makers to base their decisions on,
- promoting the freedom of expression,
- improving the delivery of education, environment, agriculture, judiciary and health information,
- reducing poverty,
- empowering women, youth and people with special needs, and
- accessing public information in a secure environment.

What we must remember is that we are all here to help promote the quality of life of our people. I firmly believe that Broadband and ICT is the key if we are to move into the future; a future of better understanding, and better quality of life for all.

For a remote small island developing state, we do not have the resources to fully take advantage of the benefits that Broadband and ICT can offer. Therefore we look forward to partnerships with the donor community, multilateral agencies and development partners in order to achieve our goals and vision.

22. Singapore

H.E. Yatiman Yusof, Senior Parliamentary Secretary for Information, Communications and the Arts

Writer William Gibson once wrote, "The future is already here – it's just unevenly distributed." Indeed there is a widespread view that broadband is the future of the Internet and today not only are we seeing uneven distribution of online access across the digital divide, figures compiled by the Organization for Economic Co-operation and Development (OECD) reveal an astonishing variation in the adoption of broadband, despite the popularity of the Internet in many countries. The wide variation in the adoption of broadband could be the result of several overlapping political, regulatory and technical factors.

To overcome these problems, there is a need for local regulators to provide incentives for operators to up the broadband speed and at the same time keep prices affordable for mass adoption. Use of broadband Internet connections has been growing rapidly in the Asia-Pacific region. By late 2003, it had spread to 5% of households, up from 3% a year before. The broadband market in Singapore has also experienced healthy growth in the year 2003. Estimated household penetration in Nov 2003 was over 32%, a growth from 24% in 2002.

Competition in the broadband market in Singapore continues to increase and prices have decreased as a result of measures taken by our Infocomm regulator, the Infocomm Development Authority (IDA). IDA facilitated the introduction of wholesale broadband access services, to enable any Internet Access Service Providers (ISAPs) to buy such services and in turn, offer broadband Internet access to their customers without the need to roll out their own networks. To encourage the deployment of innovative broadband technologies in Singapore, and to improve the competitiveness of the broadband market in Singapore, IDA has embarked on an Ultra-Wideband (UWB) Program to provide our end-users with an alternative mode of broadband access. Such wireless broadband technologies have the advantage of fast deployment at low cost compared to the traditional wire-based broadband technologies like cable modem and xDSL.

However as we move ahead in the race for faster and better connections, we must not neglect those who have been left behind by the digital divide. Last year, I had the pleasure of officiating at the "Great Singapore Surf". As part of the National IT Literacy Training Program (NITLP), the Great Singapore Surf reached deep into the community of Singapore to provide affordable IT training to workers, homemakers and senior citizens. Mass IT literacy training and PC ownership schemes have helped to equip more Singaporeans with basic ICT training, improve access to PCs and the Internet for lower income families, and instill consumer confidence in online transactions.

Besides equipping citizens with the necessary ICT skills, Singapore also believes that a conducive business environment will lead to a thriving and dynamic ICT industry. In Singapore, we continue to harness ICT in government and business to enhance competitiveness. Our efforts have been noted in the recent Accenture's annual survey on e-Government. Singapore was once again rated as the leading e-Government in Asia, and second only to Canada globally. The Singapore government continues to underline its commitment to the value of ICT. Under its second e-Government Action Plan, S$1.3 billion will be invested in infrastructure and capabilities to deliver integrated electronic services. Singapore offers a unique combination of ingredients to be the digital living lab for the region and beyond. We are a base for 6,500 multinational companies, a home to tech-savvy citizens, and a hub for high-speed international and regional connectivity. With co-funding from IDA, we have in place incentive schemes such as the Pilot Trial Hotspots Scheme (PATH) and the Call-for-Collaboration (CFC), which encourage businesses to invest in emerging technologies for pilot usage by early adopters.

I am happy to note that the ICT landscape is looking brighter in not just Singapore but the entire Asia-Pacific region after a period of downturn. For Singapore, the latest IDA Annual Survey on our Infocomm industry revealed that the Infocomm sector saw a revenue growth of 1.7 percent last year, to reach S$32.7 billion. Companies surveyed gave a forecast of pos-

itive revenue growth in the region of 6 to 7 percent in 2004 and 7 to 9 percent in 2005. With the positive growth expected, demand for Infocomm jobs is expected to increase by 3 to 4 percent for the next 2 years. Beyond Singapore, the International Data Corp (IDC) projected IT spending in the Asia-Pacific region, excluding Japan, to grow 10 percent to US$88 billion this year. This represents a sharp increase from the 3.4 percent growth seen in 2003, reflecting the continuing recovery in regional economies.

Singapore has much to learn from the experiences of other countries. Given the vibrancy of the Asia-Pacific ICT market, a venue such as this conference is certainly most useful to share knowledge, experiences and views on ICT policies and implementation ideas. It is also important that we keep an open mind to innovative solutions, which I am confident this meeting will help to stimulate and nurture. The exchange of valuable ideas could be further developed through discussions at the working level to achieve a more even distribution of digital access in the future. Technology wise, the future is already here, it is now up to us to harness it to improve the lives of our people.

23. Sri Lanka

Hon. Rohitha Abeygunawardana, Deputy Minister of Posts, Telecommunication and Upcountry Development

The Government of Sri Lanka is committed to make available the benefits of the information age to remote and rural communities, people of all income levels, people of all levels of education, without gender discrimination, elderly and people with special needs due to various forms of disabilities. ICT will also serve as a critical enabler for poverty reduction. It has the potential to create earning opportunities especially for remote and rural communities. It needs a strong national commitment and leadership to develop ICT in order to help mankind, and the Government of Sri Lanka is committed to do so.

The time has come for all of us, as representatives of our people, to work in partnership with the private sector and the civil society to help to bridge the digital divide. We all realize that ICT have the potential to improve the delivery of and access to basic services as health and education, specially serve as a tool for empowerment of women, and children living in rural areas and to increase transparency, accountability and effectiveness of governments and civil societies.

We in Sri Lanka are also concerned about enhancement of much needed infrastructure and human capacity building. For this, developing countries will have to look for assistance from the International Telecommunication Union (ITU) and the Asia Pacific Telecommunity (APT). The human factor is one of the crucial ingredients for development of ICT. ICT is not only bridging the digital divide, it means bringing the people together. It is also about people working together.

Therefore, let us consider all those people who will benefit from the development of ICT, because the digital divide will continue to grow unless marginalized and under-served communities are considered in the process to utilize ICT as an enabler for development.

24. Tonga

H.R.H. Prince Ulukalala Lavaka Ata, Prime Minister and Minister of Communications

ICT as we know today is not just growing at a fast pace; it is exploding and is increasingly affecting our daily lives. We now need to migrate to broadband in order not to miss out on the benefits of ICT. Additionally, broadband varies according to different backgrounds and settings, from 45 Mbps downwards.

Nevertheless, you may agree, Broadband and ICT is a system of shared knowledge and information, and we should enhance its potential to support and promote the goals of the Bangkok Agenda before us today. Our collective effort here at this Conference is aimed at working together in partnership and solidarity to develop a common vision and better understanding of Broadband and ICT Development by adopting the declaration and the list of actions of the Bangkok Agenda for implementation by Governments, Institutions and all sectors of civil society in our region.

Tonga has adopted the same set of principles driven by an understanding that expanded connectivity will stimulate domestic growth and will provide the scope for greater Tongan participation in the global information economy, guided by its prime objective which is "To improve sector performance to ensure domestic and global connectivity throughout Tonga. This includes improving quality of life, geographic coverage, service affordability and access to new service applications."

This has resulted in the liberalization of the market and the introduction of competition at the turn of the century. Within a year of implementing these policy decisions, tariff for almost all services dropped sig-

nificantly by more than 200 percent. Teledensity has increased more than double.

Government at the same time is in the process of connecting Ministries and Departments via fiber optic cable in support of one of the two main goals of the Economic and Public Service Reform Program (EPSRP) currently undertaken. One objective of this reform is to establish a Human Resource Management Information System (HRMIS) – a real-time interactive HRMIS delivering accurate and timely information to Ministries and Departments as well as providing an on-line inquiry service.

A Universal Access System is being designed to ensure that any citizen who requires communications access, can obtain it. This also includes emergency access communication from uninhabited islands.

And why Government is doing all this? I see Government as not an obstacle to all these Broadband and ICT developments as argued by many, rather, an enabler and provider of efficient and effective policy and regulatory framework and ensuring a level playing field for all.

I am also glad to announce that the literacy rate in my country is something in the order of 98/99 per cent, which has been attributed to the concerted effort of Government for a number of decades now to make primary education compulsory and free. Today, computer literacy courses are compulsory in secondary school curriculums and are also a prerequisite for entering the workforce. Online training courses have also been introduced at tertiary level, with resulting University degrees beginning to bear fruit.

Unlike some larger States our people is our only resource. Building and strengthening their skills in Broadband and ICT usage is a better and more attractive option in achieving our economic and social developmental goals.

25. Vietnam

H.E. Mai Liem Truc, Standing Vice Minister, Ministry of Posts and Telematics

Broadband network carries a very high volume of traffic. If something happens with the network, the impact is very critical. A few weeks ago, the submarine optical fiber cable TVH, connecting Vietnam, Thailand and Hong Kong was broken for a few days and caused Internet congestion to a large number of Internet users though we have satellite connection, SEMEWE3 and CSC cable connection to the rest of the world. Therefore, the security of the network with multi-destinations with broadband connections with enough standby capacity is necessary. I therefore fully support the proposal of Broadband Highway North-South and East-West of the Asia-Pacific region and the Great Mekong Sub-region Super Highway.

Investment is a crucial issue of developing countries for rapid development of telecommunication infrastructure, including broadband. Introduction of competition is very important in mobilizing investment, improving quality of services and reducing tariff. In Vietnam, we have 6 facility based operators (FBO), dozens of service based operators (SBO) and ISPs. We have also attracted 1.5 billion USD of foreign direct investment in network establishment and service provision of international, mobile and fixed services. However, Internet and broadband services are still unaffordable to rural and mountainous population. In Vietnam, we have created a Universal Service Fund to support the provision of services to rural and mountainous areas. Besides, appropriate low cost technologies are being studied and applied to extend the network, including Internet and broadband to rural areas.

Because of the rapid technology advancement and the restructuring process in telecommunications and IT sector in every country, particularly in developing countries, the management and operation of the sector have to keep pace with new rapid changing environment. Therefore, capacity building, human resource development and management are very important. APT as a training and policy coordinating organization is very useful to its member economies.